Transformations in Higher Education: Online Distance Learning

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Higher education is undergoing radical shifts that are part of the larger wave of changes taking place in our society. The transformation affects all sectors of higher education, especially distance learning and how it relates to the University's regular offerings. I begin with clarifying the terms commonly associated with distance learning and elaborate on two main instructional models of online distance learning. Locating the developments in distance learning within the broader transformations in higher education, I explore how the tradition-shattering changes brought about by the potential of new technologies are impacting the tradition-bound activities of bricks and mortar campuses as they give rise to new organizational structures and new management styles in higher education.

DISTANCE LEARNING AND DISTRIBUTED LEARNING

Distance learning involves increasing access to education through transcending the barriers of geography that separate the teacher from the learner. Distance learning is sometimes considered a subset of "distributed learning"—a generic term that encompasses technology-mediated learning in which a combination of modalities may be used depending on the nature of the curriculum as well as the students. "Distributed learning" is an open model, and therefore encompasses much of what is done in "traditional education." As a result, the concept has been useful to many educators in referring to the fundamental changes that are part of the Internet revolution. Although the American Council on Education and Educause have made a case that the two terms, "distributed education" and "distance education," are almost interchangeable (Oblinger, et. al., 2001), it is nevertheless important to note that they address distinctly different concerns, depending on the context. Distance learning, then, is primarily about access, rather than about the modalities that can be used in providing the appropriate learning experiences for students. "Distance learning" can be a subset within the constraints of a particular system of "distributed education." However, as access becomes the focus, "distributed educa-tion" becomes a subset of "distance learning," since certain modalities may hinder access.

We learn more directly about the revolution in education if we consider the following possibilities inherent in the use of the Internet in distance learning, since these possibilities can also be incorporated into non-distance learning modalities:

- Students can now participate in the same class even if they live thousands of miles away from each other in different time zones. This was ordinarily not possible in the past, except through "correspondence education," using assignments mailed to the students, a practice that had many other limitations.

- The increasingly easy access to the Internet and thus learning networks almost anywhere in the world provides the opportunity for students and faculty to be "no-madic"—an opportunity not readily available in the past. Students and faculty can be anywhere, and can be temporarily away from their principal places of residence.

- Students and faculty can be in touch with each other at any time of the day, seven days a week, regardless of time zones, when the Internet access to discussions and course material is available asynchronously.

Increasingly, research on the outcomes of asynchronous forms of networked learning indicates that students do as well as or even better than those in traditional classrooms. In fact, in her concluding statements to the Fourth Pew Learning and Technology Symposium, Carol Twigg raised the possibility that better results may be achieved by opening up new avenues for learning:

> The new providers who participated… are creating a new higher education paradigm, which includes new boundaries for behavior, new guides to action, and new rules for

success. As we continue to develop online courses and programs, let's follow their lead, building on the strengths of the Internet to create new learning environments that surpass traditional modes of instruction. (Twigg, 2001, 18).

TWO MODELS IN ONLINE DISTANCE LEARNING

On surveying online distance learning as it is practiced across the nation, two basic models emerge: the broadcast model and the asynchronous learning network model. The broadcast model is based on the assumption that the instruction involves transmission of knowledge from the teacher to the students whereas the asynchronous learning network model is based on constructivist theories of learning where students are seen as actively involved in constructing knowledge.

Broadcast Distance Learning

A typical format for a traditional college class primarily involves the faculty member lecturing to students. Reading assignments, group discussions, films, quizzes, etc., often accompany the centerpiece lectures. The lecture with other accompanying activities where the focus is on the transmission of knowledge is an example of "broadcast" teaching. The broadcasting of information can easily be done over the Internet. Extended "bandwidth" websites can provide live lectures in video and audio format along with lecture text (for hearing impaired students). Posted syllabi and lectures can now be made readily available to students both on-campus and in remote locations, where they can be downloaded and printed even before the class officially begins. More complex, interactive, pre-scripted programs can also be made available in the asynchronous "broadcast" mode, such as individualized instruction packages, self-assessment tools for the students (including quiz data-banks), etc. Indeed many corporate training programs utilize this form of broadcast distance learning, allowing employees to receive training modules without leaving the home or workplace.

The broadcast approach is attractive to many administrators since it offers opportunities to drastically reduce the costs of education by increasing class size and by providing more "canned" education for students. Some traditional institutions also employ the broadcast model of teaching online courses by video-taping lectures and making them available in a streaming media format on the Internet. In some cases, the broadcast model of presentation is accompanied by both chats as well as asynchronous online discussions.

Asynchronous Learning Network

In asynchronous learning network courses, the focus shifts from preparing elaborate web-based materials to the more valuable elements of the college experience: the development of a community of learners by fostering student-to-student and student-to-teacher interactions. Employing this model, instructors are free to use the same materials that they assign for on-campus courses, though they are required to change their instructional strategies to realize more fully the potential of new communication technologies. By shifting the focus away from the lecture, greater possibilities are realized for making teaching/learning more dialogic. The teacher becomes a mentor, a moderator, and a facilitator, rather than a conveyor of information. A major aspect of the "distance revolution" in pedagogy, therefore, is the shift in focus from "broadcasting" to interactive learning in networked communities. The shift in emphasis from teacher "inputs" to learner "outcomes" is one reason why proponents prefer the term "distance learning," to "distance education."

Thus, the most promising and interesting form of online distance learning is one that emphasizes the teacher and students working in small learning networks involving asynchronous interactivity. "Asynchronous Learning Networks" (ALN) is the term coined by Dr. A. Frank Mayadas, of the Alfred P. Sloan Foundation, a major philanthropic organization and pioneer in working with universities to support innovative online distance learning projects. Although it sponsors some projects that include "broadcasting", their primary purpose is to encourage projects that explore the potential of active interaction amongst students and faculty in small groups: the mode of instruction practiced in traditional, "synchronous" settings by the best teachers.

Courses based on an asynchronous learning network philosophy encourage students to become actively involved in the learning process—a role that promotes self-study at the same time as participation

in online activities with other course participants. Furthermore, because asynchronous discussions are primarily in written form, students are more likely to complete reading assignments before they respond to fellow students in a "threaded discussion." Students also tend to be more reflective because the discussions are generally archived. The contributions of the students are thus available to everyone and can be reread by the students; such an opportunity to refer to past discussions is not usually available so readily in a live class. Dialogue can now move more readily into a stage of "metalogic" whereby a "conversation about some problematic subject" is such "…that not only do the participants discuss the problem but the structure of the conversation as a whole is also relevant to the same subject." (Bateson, 2000, p. 1)

Pedagogy rises to the forefront in courses based on the ALN model, since the focus is on how the teacher manages and facilitates active learning in the course through the skillful use of assignments and discussions. At times it may be best for the teacher not to intervene in discussions and allow the students to resolve issues or the problem that they are engaged in resolving. At other times it may be necessary to insert a comment or question to steer discussions away from matters that are irrelevant to the topic. Skill in moderating and facilitating becomes more important than direct transmission of expert knowledge—the "broadcast" function.

BROADER TRANSFORMATIONS IN HIGHER EDUCATION

The new developments in distance learning occur at a time when institutions of higher education, especially traditional state institutions, are facing a new crisis brought about by the rising costs of higher education, the rise of for-profit universities, and the corporatization of the university. These challenges to the traditional university have become part of the discourse on online distance learning and have contributed to transformations in how distance learning is conceived.

The Rising Costs of Higher Education

Expenses at universities have been increasing at a rate higher than inflation while state support has been decreasing. An important cause of the rising costs is technology. More and more universities are adopting increasingly sophisticated technology (including the costs for upgrades and maintenance) in order to provide the best resources for its researchers, faculty, and students. To help meet mounting expenses, both state and private universities have increased tuition at alarming rates over the last twenty years. At the same time, the willingness of state governments to provide funds to keep tuition low at state universities has diminished, creating the challenge of how to meet the need for broad access to higher education. Tuition rates now exceed what many students from economically disadvantaged backgrounds can afford. The democratic ideal of providing equal opportunity to all qualified students is greatly eroded as tuition goes up in all categories of institutions.

The Rise of For-Profit Universities

Another major shift in higher education that has taken place over the last two decades has had an important impact on the development of online distance learning. The rise of for-profit universities, some of which are regionally accredited multi-campus institutions, primarily target the vocational and career needs of older students in higher education. The DeVry Institute of Technology has 19 campuses that emphasize areas of study related to the digitalization of the world economy.

The phenomenal growth of the University of Phoenix has been amply documented in the press and elsewhere (see especially Ruch, 2001). Phoenix considers itself the largest university in the United States with over 116,300 students on 116 campuses in 22 states. Institutions such as the University of Phoenix have joined the distance learning bandwagon by providing online distance learning courses that cross state lines and offer courses and programs. They offer a more consumer-oriented package at times that are convenient to their major target population. Traditional geographic boundaries that defined the turf of universities and colleges are rapidly disappearing as online distance learning opportunities develop. The University of Phoenix Online has about 45,200 students in degree programs in every state of the union, and in several foreign countries. The curriculum is designed by a small group of well-paid faculty. Classes are small, typically consisting of 12 to 14 students, and taught by faculty paid at much lower rates than faculty at research universities.

These for-profit institutions are known for their efficiency in serving students as well as their faculty, and for reducing costs by eliminating the usual accoutrements of traditional universities. They see their mission as serving adult learners and offering programs in areas that the market demands. They pose a special threat to land grant universities, since they can provide many continuing education and extension programs that are in great market demand. Revenues from programs are often used to support other extension programs to the community at land grant universities. This has led to a reconsideration of the practice among land grant institutions of supporting extension services at no cost or at modest cost. It has also encouraged them to explore the potential of online distance learning as a way of keeping up with their more cost-conscious, for-profit competitors.

Corporatization of the University

In order to cope with the rising costs of education and decreasing state support, public universities, especially those that are large, have responded by adopting a corporate style of management with the aim of making the institution organizationally more efficient. Some universities have even created for-profit centers in which the university becomes the major beneficiary. The growing corporate quality of higher education has also created stresses and strains in the ivory tower. Faculty fear the loss of the leisurely pace of campus life so important to the contemplative rhythm of scholarly production and teaching. They bemoan the rapid disappearance of the very features that attracted faculty in the first place to their profession.

The increasing corporatization of universities is also evident in the manner in which scarce resources are allocated. For example, questions are raised as to whether funds should go to improve undergraduate education or to more costly graduate and research programs and facilities. Should scarce resources go to serve the smaller proportion of graduate students whose existence is so vital to a first class research university? Or should funds go to meet the needs of undergraduates? The high demand for greater access to higher education has been addressed by diverting more and more students to junior colleges and non-research, four-year colleges. These institutions are less costly to operate, and the redirection of resources has added to the financial crises felt by large state research

universities. In addition, as students pay higher tuition, they increasingly demand more services and "return for their money," as they shift their own relationship to the institution as "consumers" and "customers."

ONLINE LEARNING AND NEW ORGANIZATIONAL MODELS

Traditional Colleges and Universities

The rise of interest in online distance learning occurs at a time of increasing concern for the rising cost of university instruction. How can universities improve access to higher education while meeting these challenges? Online distance learning is certainly not inexpensive. Nevertheless, at least four economic advantages can be discerned.

- Less "bricks" with more "clicks." Online options reduce the need for investing in new capitol improvement such as classrooms, dormitories, campus centers, and athletic facilities.

- Much (but not all) of the required minimal and appropriate technology is already available to an increasing number of students. Access to the Internet has become an integral part of life, including in the work place and in the schools.

- Universities already invest in portals, courseware management systems, and the necessary hardware and software to run a 21st century university. These investments are also needed for on-campus residential students, and so incur minimal additional expenses for distance learning. They are part of the infrastructure of up-to-date "distributed learning" modalities as well as the essentials of "distance learning."

- Much of the technological innovations in administrative and student services that are necessary for online distance learning also result in the efficiency of services of on-campus enterprises. "Legacy systems" of distance learning that are expensive to maintain can be phased out or retained in a minimal form that reduces unnecessary costs.

The corporate approach to education, of treating the educational enterprise as a business, has several advantages. Services such as registration, cashiering, and course management become more automated, integrated and student-friendly. The cost per student declines as the number of students increases. Economies of scale benefit the centrally coordinated support functions of the university, leaving the major costs to be experienced in the instructional arena, which is where the basic education takes place.

The disadvantages of using a corporate model in running an educational enterprise can be avoided by using it in a limited way, such that the most "personal and individualized" aspects of teaching and learning are preserved, as the infrastructure of administration and support services is streamlined and made more cost-effective. The broadcast functions of teaching and learning can also be relegated to a more organized or "corporate" process in order to free faculty for more active interaction with students. Outsourcing these duties to commercial vendors, as is done with the publication of textbooks, is already occurring. This means that as costs go down due to increased scale and streamlining of academic and administrative bureaucracies, more money becomes available to enhance the teaching/learning part of campus life, as well as that of the "virtual campus"—the campus that serves distance-learning students. In addition, these economies also improve the lot of students on campus who have access to some of the distance learning services as well as to some of the courses, or portions of the courses of online academic programs. The idea is to combine the best of "big corporate mega businesses" with the intimacy and individualized relationships of the "mom-and-pop store" for both non-distance and distance education.

Online distance learning is also transforming the landscape of higher education in new ways that are still unfolding, perhaps in disturbing ways. An example is Western Governors University (WGU), originally founded by the governors of 19 states (including Hawai'i) and Guam. In its present form, WGU offers degrees and certificates to its students by integrating courses offered by different educational and corporate partners. Colleges do not offer degrees to WGU students, but become "providers" of educational experiences that assist WGU students to earn a competency-based WGU diploma that is not based on credits accumulated. Another example is E-Army

Access Online, managed by Price Waterhouse Coopers, which has gained a huge multi-million dollar contract to coordinate higher education opportunities for the U.S. Army. E-Army Access Online is partnering with traditional universities and various technology companies to serve as course and program providers and offer support services. The rise of these "integrators," as they have been called, poses a distinct threat to the autonomy of traditional universities. In effect, they demote colleges to the status of mere "providers" or even "vendors" of courses and thus erode their ability to integrate educational experiences of their students into their own distinct and coherent degree programs.

CONCLUSION

As more and more institutions, both for-profit and non-profit, offer online distance-learning programs and courses across state boundaries, the circulation of money from tuition and fees within individual states may increase or decrease. Some institutions will benefit; others will not. For example, the more out-of-state students enroll in online courses offered by a university located in a state, the greater the revenues that enter into the state economy, and vice versa. The success of online stores (like Amazon.com) may be an indication of what may occur to online education providers. For Hawai'i, this means that as more Hawai'i residents pay tuition to outside online providers, more money flows out of the Hawai'i economy. If Hawai'i institutions provide more programs and courses to attract students living outside Hawai'i, more tuition moneys flow into the state. The corollary of this principle is that when the Internet economy is applied to education, all Hawai'i-based institutions, both public and private, now become allies in supporting the Hawai'i economy. The net gain or loss of tuition dollars across state lines may be negligible at the moment. However, distance learning across state borders could easily increase to a magnitude that would make it a significant factor in the health of Hawai'i's economy. Some futurists are predicting that this will happen.

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